

1. A nutritional intervention composition, taken after meals (Claim 4), enhancing and extending post meal satiety for reducing weight, binding with lipids and bile acids, lipogenesis inhibition, Glycemic Control and reduced sleep latency. The invention also serves well in conditions where depleted serotonin levels exist such as anxiety disorders, depression, obsessive compulsive disorders, pain disorders and aggression, comprising:
  - a) a source of typtophane as the modified amino acid, 5-Hydroxy tryptophane from the seed of African Griffonia simplicifolia being in the range of 50mg to 100mg per serving
  - b) a source of endogenous tryptophane naturally extracted from protein and bound to blood serum albumin and an additional 20% tryptophane circulating in the blood as free tryptophane.
  - c) a source of salicylic acid for releasing endogenous L-tryptophane from the serum albumen complex. In the invention Aloe, freeze-dried powder 200X being in the range of 75mg to 125mg per serving.
  - d) a source of Niacin (Nicotinic Acid) being in the range of 5mg to 20mg per serving.
  - e) a source of Vitamin B6 (pyridoxine) being in the range of 5mg to 20mg per serving.
  - f) a source of carbohydrates having a high glycemic index in an amount sufficient to facilitate the transport of tryptophane across the blood brain barrier.

I. The combinations of endogenous tryptophane (b) released from serum bound albumen (c), circulating tryptophane (b) and supplied (exogenous) tryptophane (a) comprise an amount sufficient to influence the transport of tryptophane across the blood brain barrier in the presence of carbohydrates having a high glycemic index (f). Once across the blood brain barrier (BBB), tryptophane becomes available for metabolism into serotonin, a neurotransmitter implicated in mood disorders, sleep regulation (Serotonin is in turn metabolized to melatonin, a sleep related hormone), anxiety disorders, depression, pain disorders, aggression and, principle to this invention, appetite reduction through enhancing and extending post meal satiety. Niacin (Vitamin B3 / Nicotinic acid) (d) and Vitamin B6 (pyridoxine) (e) are present in the invention in amounts necessary to facilitate tryptophane uptake.

2. What is claimed is; the absorption and chemical binding of fats, lipids, bile acids, lipogenesis inhibition and the introduction of fiber for reducing weight (Claim 1), comprising:
  - a) Chitosan, a polycationic polymer obtained by alkaline deacetylation of chitin from shellfish exoskeletons being present in the range of 450mg to 550mg per serving.

- b) a source of saponins in the range of 3mg to 5mg, in the invention, from Aloe freeze dried powder 200X being in the range of 75mg to 125mg.
- c) a source of Hydroxycitric acid (50%) from Garcinia cambogia, (an exotic fruit grown in Southern India) being in the range of 100mg to 135mg per serving.

## II. Weight loss involves a complex series of physiological events to prevent rebound weight gain.

Since the “Energy Homeostasis System” is inherently biased toward weight gain, measures are taken in this invention to circumvent a natural human tendency toward reduced metabolic rate as precipitated by reduced calorie intake. Enhanced and prolonged satiety (1) is the first step in weight loss through appetite suppression. The second step includes the absorption of fats, lipids and bile acids (1), the introduction of fiber and lipogenesis inhibition to lower body weight and reduce fat mass. Chitosan (a) is a positively charged fiber that chemically binds to negatively charged lipids, fats and bile acids during digestion, thereby reducing fat absorption, slowing gastric emptying time and interfering with glucose absorption (further contributing to satiety ). In combining with bile acids, chitosan prevents the inhibition of Cholecystokinin (CCK) a peptide acting as a satiety signal in humans. The addition of Saponins (b) in Aloe freeze dried powder 200X increases the capacity of Chitosan (a) to bind with fats. Hydroxycitric acid (c) competitively inhibits the enzyme adenosine triphosphate-citrate playing an essential role in lipogenesis inhibition to lower body weight and reduce fat mass. Early trials indicated sub-par performance; however, when Hydroxycitric acid is combined with the chemical binding properties of Chitosan, lipid absorption is improved 25% to 30%.

3. What is claimed is; Glycemic control (Claim 1) reducing elevated blood glucose levels in Type two Diabetes, an insulin induced advantage in the transport of free tryptophane across the Blood Brain Barrier (BBB), Carbohydrate management (1) following the ingestion of rich foods and elevated insulin levels to shift toward catabolic pathways thereby upsetting the routine bias toward weight gain, comprising:
  - a. Trigonella foenum graecum extract 4:1 (Fenugreek seed) being in a range of 300mg to 400mg per serving.
  - b. Momordica charantia (Bitter Melon fruit) powder being in a range of 75mg to 125mg per serving.
  - c. Lagerstroemia speciosa (Leaf) Extract being in a range of 15mg to 30mg per serving.

- d. Chromium polynicotinate being in a range of 75mcg to 125mcg per serving.
- e. Vanadium (Vanadyl sulfate) being in a range of 50mcg to 100mcg per serving.
- f. Magnesium (Magnesium aspartate) being in a range of 5mg to 15mg per serving

III. Glycemic control (1) in the invention is multi-tiered to maintain a bias against rebound weight gain, to reduce a reversion to an anabolic pathway (3), to interfere with the secretion of the acylated peptide Grehlin, to increase insulin production enhancing the transport of tryptophane across the Blood Brain Barrier (I) and as an antidote (3) (Carbohydrate metabolizer) following the ingestion of Rich food (3). Fenugreek seed (a) shows evidence of a hypoglycemic effect due to the presence of 4-Hydroxyisoleucine a constituent making up 80% of the total content of free amino acids. Fenugreek (a) affects gastrointestinal transit, slowing glucose and directly stimulating insulin. In people with non-insulin dependent diabetes, the ingestion of fenugreek (a) can improve plasma glucose and insulin response. In people with insulin-dependent diabetes, the ingestion of Fenugreek (a) can reduce plasma glucose, glycosuria, and daily insulin requirements. Studies suggest Fenugreek (a) may decrease calcium oxalate deposition in the kidneys, and may lower serum cholesterol. Momordica charantia (b) contains an insulin-like polypeptide called polypeptide P, plant insulin, or p-insulin. P-insulin has pharmacologic effects similar to bovine insulin with an onset of action between 30 and 60 minutes, and a peak effect at about four hours. Momordica charantia (b) contains several other flavonoids with a variety of pharmacologic effects including; lowering cholesterol, raising hemoglobin and increasing white and red blood cell counts. Alpha- and Beta-momorcharin appear to have immunosuppressive activity in vitro and in animal models. A bitter melon protein from the seed and fruit called Momordica anti-human